

In the Claims:

1. (Currently Amended) An instrument for the analysis of a sample of volatile organic compounds including, said instrument comprising:

an evacuated chamber;

a downstream quadrupole mass filter and an upstream quadrupole mass filter housed within [[an]] said evacuated chamber; and

a curved flow tube having a first end and a second end, said tube connecting the upstream quadrupole mass filter to the downstream quadrupole mass filter.

2. (Currently Amended) The instrument as claimed in according to claim 1, including further comprising:

means an apparatus associated with the chamber and connectable to an ion source to direct for directing ions from the ion source to the upstream quadrupole mass filter to extract, said upstream quadrupole mass filter extracting ions to create a precursor ion beam;

a lens to focus for focusing the ion beam and to inject for injecting the beam into [[a]] the first end of the curved flow tube;

means to enable an apparatus for enabling a stream of non-reactive carrier gas to pass through the flow tube;

an injection means apparatus for injecting the sample of volatile compounds into the flow tube for reacting with the extracted ions; and

through which the sample of the volatile organic compounds may be injected and into the flow tube to react with the extracted ions;

means a connection apparatus to connect for connecting the second end of the flow tube to the downstream quadrupole mass filter, through which the said sample of

~~charged ions are directed to a detector device and for directing the sample of charged ions to a detector device.~~

3. (Currently Amended) The instrument ~~as claimed in claim 1 according to claim 2, including further comprising~~ an electrostatic shield located in the chamber ~~to shield for shielding~~ the downstream quadrupole mass filter and detector from the upstream quadrupole mass filter and source introduction.

4. (Currently Amended) The instrument ~~as claimed in claim 1 according to claim 2, wherein the non-reactive carrier gas is helium.~~

5. (Currently Amended) The instrument ~~as claimed in claim 1 according to claim 2, wherein the non-reactive gas comprises a mixture of helium and other non-reactive gases.~~

6. (Currently Amended) The instrument ~~as claimed in~~ according to claim 1, wherein the flow tube is pressurized at a higher pressure than ~~that the pressure~~ of the interior of the chamber.

7. (Currently Amended) The instrument ~~as claimed in~~ according to claim 1, wherein the flow tube acts as a drift tube and has a potential gradient applied to [it] said flow tube.

8. (Currently Amended) The instrument ~~as claimed in~~ according to claim 1, wherein the flow tube acts as a flow tube and has no potential gradient applied to [it] said flow tube.

9. (Currently Amended) The instrument ~~as claimed in claim 1 according to claim 2, wherein a vacuum pump is utilized to ensure the non-reactive carrier gas will pass through the flow tube.~~

10. (Currently Amended) The instrument ~~as claimed in claim 1 according to claim 2, wherein further comprising a venturi orifice for effecting the injection of the non reactive gas into the flow tube is effected through a venturi orifice.~~

11. (Currently Amended) The instrument as ~~claimed in~~ according to claim 10, wherein the curved flow tube and venturi orifice are constructed to provide a laminar flow of the gas-ion mixture through the flow tube.

12. (Currently Amended) An instrument for the analysis of volatile organic compounds, said instrument including comprising:

an evacuated chamber;

a downstream quadrupole mass filter and a detector, and an upstream quadrupole mass filter and a source introduction, housed within [an] said evacuated chamber;

an electrostatic screen for dividing the interior of said chamber ~~being divided~~ into sections ~~by an electrostatic screen~~ to shield the downstream quadrupole mass filter and the detector from the upstream quadrupole mass filter and source introduction; and

a flow tube comprising a straight tube and two bends connecting the upstream quadrupole mass filter to the downstream quadrupole mass filter.

13. (Currently Amended) The instrument as ~~claimed in~~ according to claim 1, wherein further comprising a pumping system for evacuating the interior of the chamber is evacuated by a pumping system that will maintain for maintaining the internal elements within appropriate operating margins.